

Application No. 10/780,438

Docket No. 2004U002.US

Reply to Office Action Dated April 12, 2005

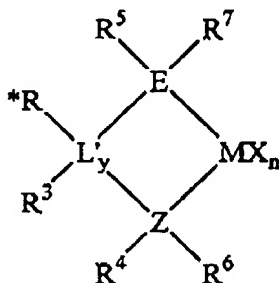
**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

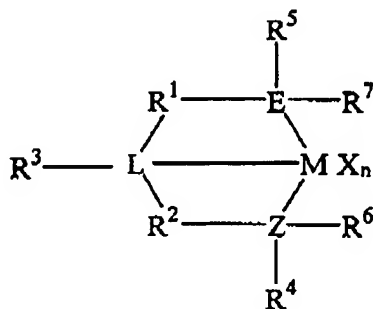
**Listing of Claims:**

1-10. (Cancelled)

11. (Currently amended) A Group 15 containing metal catalyst compound represented by one of the following formulas:



or



wherein M is a metal;

X is a halogenated aryloxy group;

y is 0 or 1;

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L is a Group 15 element;

L' is a Group 15 element;

E is a Group 15 element;

Z is a Group 15 element;

R<sup>1</sup> and R<sup>2</sup> are independently a C<sub>1</sub> to C<sub>20</sub> hydrocarbon group, a heteroatom containing group having up to twenty carbon atoms, silicon, germanium, tin, lead, or phosphorous;

R<sup>3</sup> is a hydrocarbon group, hydrogen, halogen, or heteroatom containing group;

R<sup>4</sup> and R<sup>5</sup> are independently an alkyl group, aryl group, substituted aryl group, cyclic alkyl group, substituted cyclic alkyl group, cyclic arylalkyl group, substituted cyclic ~~arylalkyl~~ arylalkyl group or multiple ring system;

R<sup>6</sup> and R<sup>7</sup> are independently an alkyl group, hydrogen, halogen, heteroatom, or hydrocarbyl group; and

R<sup>\*</sup> is a Group 14 atom containing group, hydrogen, halogen, or heteroatom containing group.

12. (Original) The catalyst compound of claim 11, wherein X is a perfluorophenoxy group.
13. (Original) The catalyst compound of claim 11, wherein the catalyst compound is supported on a carrier.
14. (Original) The catalyst compound of claim 11, further comprising an activator.
15. (Original) The catalyst compound of claim 11, wherein M is selected from the group consisting of titanium, zirconium, and hafnium.
16. (Withdrawn) The catalyst compound of claim 11, further comprising one or more metallocene catalysts represented by the formula:



wherein: M is a metal atom;

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$Cp^A$  and  $Cp^B$  are each independently an unsubstituted or substituted cyclic ring group;

X is a leaving group; and

n is zero or an integer from 1 to 4.

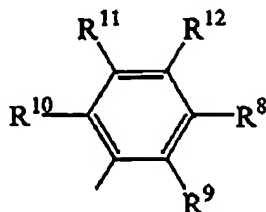
17. (Withdrawn) The catalyst compound of claim 16, wherein  $Cp^A$  and  $Cp^B$  are each independently selected from the group consisting of cyclopentadienyl, indenyl, combinations thereof, and derivatives thereof.
18. (Withdrawn) The catalyst compound of claim 16, wherein  $Cp^A$  is a cyclopentadienyl group and  $Cp^B$  is an indenyl group.
19. (Withdrawn) The catalyst compound of claim 16, wherein  $Cp^A$  is a cyclopentadienyl group and  $Cp^B$  is an indenyl group and the one or more polymerization catalysts comprises a bridging group A, bridging  $Cp^A$  and  $Cp^B$ .
20. (Withdrawn) The catalyst compound of claim 16, wherein  $Cp^A$  is a cyclopentadienyl group and  $Cp^B$  is a cyclopentadienyl group.
21. (Currently amended) The ~~method~~ catalyst compound of claim 11, wherein the halogenated aryloxy group comprises a perfluorophenoxy group.
22. (Currently amended) The ~~method~~ catalyst compound of claim 11, wherein  $R^1$  and  $R^2$  are selected from the group consisting of a  $C_1$  to  $C_{20}$  hydrocarbon group, a heteroatom containing group, silicon, germanium, tin, lead, and phosphorus.
23. (Currently amended) The ~~method~~ catalyst compound claim 11, wherein the L or L' is bonded to a hydrogen, a Group 14 atom containing group, a halogen, or a heteroatom containing group, and wherein each of the two Group 15 atoms are bonded to a cyclic group, hydrogen, a halogen, a heteroatom, a hydrocarbyl group, or a heteroatom containing group.

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24. (Currently amended) The ~~method~~ catalyst compound of claim 11, wherein R<sup>4</sup> and R<sup>5</sup> are represented by the formula:



wherein R<sup>8</sup> to R<sup>12</sup> are each independently hydrogen, a C<sub>1</sub> to C<sub>40</sub> alkyl group, a halide, a heteroatom, or a heteroatom containing group containing up to 40 carbon atoms.

- 25-43. (Cancelled)